transition temperature of the resin of the insulating base material of the circuit substrates. Similar features are presented in the independent method claim 9.

The requirement of the different glass transition temperatures is significant. When the insulating layer has a larger coefficient of expansion than the circuit substrate, the circuit substrates will tend to impede the expansion of the insulating layer in the lateral direction as the temperature is increased. As a result, the insulating layer will tend to expand in the thickness direction. The expansion in the thickness direction can put stress on the conductive material used for the inner via connecting the opposed circuit substrates. Separation of the conductive material and loss of conductivity can result from this. The problem is particularly pronounced in a product including an electronic component embedded in the insulating layer. In such products the insulating layer must be relatively thick due to the electronic component, and the relatively large thickness of the insulating layer, which corresponds to the length dimension of the inner via, results in a relatively large aspect ratio (length/diameter). This makes the inner via more susceptible to damage and loss of conductivity when the thickness of the insulating layer expands. The experimental results reported at pages 24-26 of the present specification and the accompanying tables and figures show how the different glass transition temperatures required by the invention of claim 1 alleviate this problem and advantageously improve the reliability of the product.

Nakatani and Ozawa do not teach or suggest the invention of claims 1 and 9. The rejection relies on Ozawa to teach the relationship between glass transition temperatures Tg1 and Tg2 of the resin composition of the insulating layer and the resin of the insulating base material, respectively. More specifically, the rejection contends that since the dielectric substrate (2) taught by Ozawa includes a mixture of dielectric powder and resin, the Tg of the dielectric substrate (2) must be higher than the Tg of each of the resin substrates. Applicants respectfully submit that the rejection's reasoning is erroneous. Tg is a physical property of a particular resin. The presence or absence of filler has no effect on the glass transition temperature. Therefore, like Nakatani, Ozawa fails to suggest the selection of resins for the insulating base material of the circuit substrates and the insulating layer that would satisfy the glass transition temperature relationship required by claims 1 and 9. Moreover, neither reference provides any basis to

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expect the advantageous improvement in reliability achieved when the glass transition temperature relationship is satisfied.

Moreover, claim 2 is even further removed from the references. In the discussion of claim 1, the rejection conceded that Nakatani did not provide the required relationship between Tg1 and Tg2. However, regarding claim 2, the rejection relies on Nakatani as suggesting a 10 degree difference between Tg1 and Tg2. Nakatani does not suggest selecting resins satisfying a particular glass transition temperature relationship. In fact, as recognized in the discussion of claim 1 in the rejection, Nakatani does not discuss the use of different resin material for the layer in which a component is housed and the layer carrying a wiring. Therefore, Nakatani manifestly fails to provide the teaching necessary to support the rejection of claim 2.

Favorable reconsideration of claims 1-17 is requested.

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)445-3804.

Respectfully submitted,

HAMRE, SCHUMANN, MUELLER & LARSON, P.C.
P.O. Box 2902
Minneapolis, MN 55402-0902
(612)455-3800

Dated: August 7, 2006

By _____
Douglas P. Mueller
Reg. No. 30,300

DPM